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PRELIMINARY REPORT INDUSTRY SERIES

1987 Census of Manufactures

MC87-I-20G(P)
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FATS AND OILS

Industries 2074, 2075, 2076, 2077, and 2079

INTRODUCTION

This report presents preliminary statistics from the 1987 Census of Manufactures for those establishments classified in the industries listed above. These data will be superseded by a more comprehensive final paperbound report. The method of data collection and use of administrative data are discussed in detail in the appendix.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

The definitions of these industries are the same as those used in the 1987 Standard Industrial Classification (SIC) Manual.¹

INDUSTRY 2074, COTTONSEED OIL MILLS

In the 1987 Census of Manufactures, Industry 2074, Cottonseed Oil Mills, had employment of 2.6 thousand. The employment figure was 50 percent below the 5.2 thousand reported in 1982. Compared with 1986, employment in 1987 decreased 28 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$470.7 million.

In 1987, establishments in this industry accounted for 91 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 97. The products primary to this industry appear in table 2 and aggregated to \$435.3 million in 1987.

The cost of materials and services used by establishments in this industry amounted to \$378.8 million in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 2075, SOYBEAN OIL MILLS

In the 1987 Census of Manufactures, Industry 2075, Soybean Oil Mills, had employment of 7.2 thousand. The employment figure was 19 percent below the 8.9 thousand reported in 1982. Compared with 1986, employment in 1987 increased 3 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$9.2 billion.

In 1987, establishments in this industry accounted for 97 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 95. The products primary to this industry appear in table 2 and aggregated to \$7.8 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$8.3 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 2076, VEGETABLE OIL MILLS, N.E.C.

In the 1987 Census of Manufactures, Industry 2076, Vegetable Oil Mills, N.E.C., had employment of 0.8 thousand. The employment figure was 38 percent below the

¹Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

Address inquiries to Bureau of the Census, Industry Division, Washington, DC 20233, or call Robert F. Miller (301) 763-2510.



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1.3 thousand reported in 1982. Compared with 1986, employment in 1987 decreased 27 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$426.8 million.

In 1987, establishments in this industry accounted for 69 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 78. The products primary to this industry appear in table 2 and aggregated to \$491.5 million in 1987.

The cost of materials and services used by establishments in this industry amounted to \$346.0 million in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 2077, ANIMAL AND MARINE FATS AND OILS

In the 1987 Census of Manufactures, Industry 2077, Animal and Marine Fats and Oils, had employment of 10.2 thousand. The employment figure was 6 percent below the 10.8 thousand reported in 1982. Compared with 1986, employment in 1987 decreased 6 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$1.7 billion.

In 1987, establishments in this industry accounted for 68 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio also was 68. The products primary to this industry appear in table 2 and aggregated to \$2.1 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$998.2 million in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 2079, EDIBLE FATS AND OILS, N.E.C.

In the 1987 Census of Manufactures, Industry 2079, Edible Fats And Oils, N.E.C., had employment of 9.6 thousand. The employment figure was 23 percent below the 12.5 thousand reported in 1982. Compared with 1986, employment in 1987 decreased 8 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$4.3 billion.

In 1987, establishments in this industry accounted for 77 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was 77. The products primary to this industry appear in table 2 and aggregated to \$4.9 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$3.0 billion in 1987. Data on specific materials consumed appear in table 3.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in the tables in this publication:

-	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate or a consistency review.
(X)	Not applicable.
(Z)	Less than half the unit shown.
do	Ditto.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
pt.	Part.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, doz, bbl, and s tons, are used in the customary sense.

CONTACTS FOR DATA USERS

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Census/ASM		
Durables	Kenneth Hansen	(301) 763-7304
Nondurables	Michael Zampogna	(301) 763-2510
Current Industrial Reports		
Durables	Malcolm Bernhardt	(301) 763-2518
Nondurables	Thomas Flood	(301) 763-5911
Import/Export Publications	Foreign Trade Division	(301) 763-5140
Industry Analysis and Forecasts	International Trade Administration	(202) 377-4356

Table 1. Historical Statistics for the Industry: 1987 and Earlier Years

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.]

Year¹	Companies² (no.)	All establishments³		All employees		Production workers			Value added by manufac- ture⁴ (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expendi- tures (million dollars)	End-of- year invento- ries⁴ (million dollars)	Ratios	
		Total (no.)	With 20 employ- ees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Speci- alization (per- cent)	Cover- age (per- cent)
INDUSTRY 2074, COTTONSEED OIL MILLS															
1987 Census -----	31	52	40	2.6	44.8	2.0	4.5	29.8	106.9	378.8	470.7	12.2	145.8	(NA)	91
1986 ASM -----	(NA)	(NA)	(NA)	3.6	61.2	2.8	6.2	40.3	177.4	487.6	678.0	17.9	133.7	(NA)	(NA)
1985 ASM -----	(NA)	(NA)	(NA)	3.5	64.5	2.7	6.6	44.3	219.3	640.2	880.8	22.0	155.8	(NA)	(NA)
1984 ASM -----	(NA)	(NA)	(NA)	3.3	57.9	2.6	6.0	39.4	197.2	727.0	906.2	23.2	187.9	(NA)	(NA)
1983 ASM -----	(NA)	(NA)	(NA)	4.1	65.2	3.3	7.4	44.7	229.9	572.9	791.4	16.9	205.6	(NA)	(NA)
1982 Census -----	47	77	59	5.2	76.2	4.3	9.7	54.5	202.9	715.0	933.3	59.6	191.8	94	97
1981 ASM -----	(NA)	(NA)	(NA)	5.5	74.3	4.5	9.5	52.2	223.2	859.8	1 086.1	⁵48.2	233.8	(NA)	(NA)
1980 ASM -----	(NA)	(NA)	(NA)	5.3	63.4	4.3	9.5	45.4	201.8	820.2	1 033.7	24.5	251.7	(NA)	(NA)
1979 ASM -----	(NA)	(NA)	(NA)	5.4	60.0	4.3	9.4	43.0	231.6	733.6	938.2	17.7	276.7	(NA)	(NA)
1978 ASM -----	(NA)	(NA)	(NA)	5.7	58.7	4.6	10.1	41.9	222.0	734.1	969.8	⁵29.9	212.1	(NA)	(NA)
1977 Census -----	62	97	71	5.2	51.5	4.1	9.3	35.9	197.4	670.8	859.2	13.0	195.4	88	89
1976 ASM -----	(NA)	(NA)	(NA)	4.9	44.3	3.8	8.2	29.3	128.7	629.0	756.5	11.7	256.5	(NA)	(NA)
1975 ASM -----	(NA)	(NA)	(NA)	5.6	46.0	4.4	9.5	31.4	203.0	790.6	970.1	17.0	221.7	(NA)	(NA)
1974 ASM -----	(NA)	(NA)	(NA)	5.7	40.7	4.6	10.6	29.0	239.4	662.8	870.6	11.1	265.9	(NA)	(NA)
1973 ASM -----	(NA)	(NA)	(NA)	5.9	37.1	4.7	10.5	26.7	166.3	410.7	549.2	8.7	169.0	(NA)	(NA)
1972 Census -----	74	115	84	5.5	34.2	4.4	9.8	24.0	88.2	368.1	458.7	9.9	97.9	85	88
INDUSTRY 2075, SOYBEAN OIL MILLS															
1987 Census -----	58	117	76	7.2	175.1	4.9	10.3	113.8	1 024.0	8 254.8	9 238.2	92.1	936.5	(NA)	97
1986 ASM -----	(NA)	(NA)	(NA)	7.0	166.6	4.6	9.4	106.4	676.7	7 104.6	7 815.5	93.3	480.4	(NA)	(NA)
1985 ASM -----	(NA)	(NA)	(NA)	7.3	168.8	4.8	10.1	110.8	711.7	7 911.7	8 629.4	109.5	625.0	(NA)	(NA)
1984 ASM -----	(NA)	(NA)	(NA)	7.9	186.6	5.3	11.0	117.9	651.6	9 067.3	9 988.2	96.5	679.6	(NA)	(NA)
1983 ASM -----	(NA)	(NA)	(NA)	8.1	180.6	5.6	12.1	119.9	888.1	8 362.2	9 059.8	79.5	1 293.5	(NA)	(NA)
1982 Census -----	52	114	84	8.9	188.7	6.2	13.4	123.1	678.2	7 896.8	8 603.6	113.4	883.9	88	95
1981 ASM -----	(NA)	(NA)	(NA)	9.9	184.6	7.0	14.9	121.6	819.8	8 375.7	9 176.9	161.0	858.4	(NA)	(NA)
1980 ASM -----	(NA)	(NA)	(NA)	10.3	178.0	7.5	15.7	116.6	846.4	8 813.6	9 752.1	138.9	1 181.0	(NA)	(NA)
1979 ASM -----	(NA)	(NA)	(NA)	10.2	161.6	7.3	15.3	105.1	907.9	8 296.5	9 085.3	93.5	1 150.7	(NA)	(NA)
1978 ASM -----	(NA)	(NA)	(NA)	9.9	149.6	7.0	15.1	100.3	612.9	7 671.1	8 234.4	145.4	888.4	(NA)	(NA)
1977 Census -----	65	121	87	9.4	130.7	6.6	14.7	87.8	373.8	7 012.8	7 580.0	72.3	804.9	87	98
1976 ASM -----	(NA)	(NA)	(NA)	9.5	121.5	6.7	14.6	82.3	624.2	6 378.8	6 739.7	87.5	1 295.7	(NA)	(NA)
1975 ASM -----	(NA)	(NA)	(NA)	9.5	110.2	6.9	14.5	71.4	340.1	5 651.4	6 159.1	119.5	807.8	(NA)	(NA)
1974 ASM -----	(NA)	(NA)	(NA)	10.4	112.9	7.7	15.8	73.7	691.9	6 733.4	7 328.3	80.9	776.7	(NA)	(NA)
1973 ASM -----	(NA)	(NA)	(NA)	9.9	97.9	7.4	16.0	64.1	623.2	4 737.9	5 272.9	53.4	715.0	(NA)	(NA)
1972 Census -----	54	94	74	9.1	82.4	6.6	14.8	54.7	350.0	3 065.5	3 357.2	41.9	577.2	85	96
INDUSTRY 2076, VEGETABLE OIL MILLS, N.E.C.															
1987 Census -----	20	23	15	.8	19.7	.5	1.1	11.2	83.3	346.0	426.8	7.4	81.1	(NA)	69
1986 ASM -----	(NA)	(NA)	(NA)	1.1	20.4	.8	1.7	12.5	110.4	426.4	524.5	1.3	73.0	(NA)	(NA)
1985 ASM -----	(NA)	(NA)	(NA)	1.2	21.4	.9	1.8	14.5	43.1	507.3	566.0	(D)	83.0	(NA)	(NA)
1984 ASM -----	(NA)	(NA)	(NA)	1.3	21.9	1.0	2.1	15.4	53.1	546.6	616.7	44.0	110.7	(NA)	(NA)
1983 ASM -----	(NA)	(NA)	(NA)	1.3	24.2	1.0	2.1	16.1	134.0	543.0	659.0	58.4	108.0	(NA)	(NA)
1982 Census -----	26	29	15	1.3	22.3	.9	1.8	14.8	80.0	467.0	556.9	66.9	83.8	93	78
1981 ASM -----	(NA)	(NA)	(NA)	1.5	25.1	1.1	2.3	17.2	120.1	439.7	581.8	⁵12.7	72.5	(NA)	(NA)
1980 ASM -----	(NA)	(NA)	(NA)	1.4	20.9	1.0	2.2	14.2	108.5	339.6	435.1	13.6	92.5	(NA)	(NA)
1979 ASM -----	(NA)	(NA)	(NA)	1.4	19.4	1.0	2.1	13.4	103.7	306.4	397.6	9.2	89.7	(NA)	(NA)
1978 ASM -----	(NA)	(NA)	(NA)	1.5	18.8	1.1	2.3	13.2	54.5	280.1	346.5	6.2	79.4	(NA)	(NA)
1977 Census -----	37	42	19	1.5	17.6	1.1	2.5	12.2	58.4	304.7	360.8	7.4	89.3	86	58
1976 ASM -----	(NA)	(NA)	(NA)	1.6	17.7	1.1	2.4	11.1	58.5	470.3	526.1	7.2	78.5	(NA)	(NA)
1975 ASM -----	(NA)	(NA)	(NA)	1.6	18.5	1.1	2.4	10.7	59.5	490.1	558.3	3.1	89.3	(NA)	(NA)
1974 ASM -----	(NA)	(NA)	(NA)	1.6	17.5	1.1	2.5	11.3	103.1	453.8	542.3	2.6	78.3	(NA)	(NA)
1973 ASM -----	(NA)	(NA)	(NA)	1.1	11.4	1.0	1.9	8.4	59.3	341.2	385.9	2.7	83.4	(NA)	(NA)
1972 Census -----	28	31	17	1.2	11.6	.9	1.9	7.8	44.8	227.1	261.0	3.1	40.7	93	63
INDUSTRY 2077, ANIMAL AND MARINE FATS AND OILS															
1987 Census -----	191	301	151	10.2	213.6	6.1	12.7	110.4	743.5	998.2	1 729.3	60.1	87.7	(NA)	68
1986 ASM -----	(NA)	(NA)	(NA)	10.8	223.6	5.9	11.2	114.3	635.9	989.6	1 632.8	41.3	55.7	(NA)	(NA)
1985 ASM -----	(NA)	(NA)	(NA)	11.1	233.9	6.9	13.0	122.3	609.6	1 189.2	1 820.2	(D)	62.2	(NA)	(NA)
1984 ASM -----	(NA)	(NA)	(NA)	13.7	253.6	9.2	15.7	136.4	730.0	1 599.1	2 323.2	76.2	82.6	(NA)	(NA)
1983 ASM -----	(NA)	(NA)	(NA)	10.7	215.6	7.1	15.1	126.1	630.1	1 202.6	1 817.7	58.7	91.3	(NA)	(NA)
1982 Census -----	270	386	189	10.8	215.1	7.2	15.5	127.8	562.6	1 188.5	1 752.5	56.5	81.2	97	68
1981 ASM -----	(NA)	(NA)	(NA)	11.8	210.9	8.2	17.2	133.6	642.9	1 261.5	1 902.0	⁵55.0	89.7	(NA)	(NA)
1980 ASM -----	(NA)	(NA)	(NA)	12.7	207.1	9.1	19.0	127.4	635.5	1 247.5	1 884.7	50.7	85.5	(NA)	(NA)
1979 ASM -----	(NA)	(NA)	(NA)	13.8	205.5	10.2	22.0	137.3	671.4	1 309.7	1 984.1	50.6	83.6	(NA)	(NA)
1978 ASM -----	(NA)	(NA)	(NA)	13.4	190.8	9.9	21.8	120.7	607.0	1 237.6	1 844.5	56.1	85.5	(NA)	(NA)
1977 Census -----	384	500	201	12.4	171.2	8.7	19.2	103.8	583.8	1 086.7	1 655.0	53.3	70.2	94	68
1976 ASM -----	(NA)	(NA)	(NA)	11.2	142.9	7.9	16.5	89.3	488.2	845.9	1 328.0	42.7	48.6	(NA)	(NA)
1975 ASM -----	(NA)	(NA)	(NA)	11.1	135.7	7.6	16.4	88.3	382.2	715.8	1 097.4	49.7	41.5	(NA)	(NA)
1974 ASM -----	(NA)	(NA)	(NA)	10.2	122.0	7.1	15.8	77.7	439.1	906.3	1 341.0	26.4	42.2	(NA)	(NA)
1973 ASM -----	(NA)	(NA)	(NA)	12.8	141.8	9.2	20.9	84.9	544.2	797.9	1 321.4	44.4	50.4	(NA)	(NA)
1972 Census -----	402	511	196	11.6	106.0	8.4	18.5	68.3	296.7	470.4	764.7	31.0	29.3	94	68
INDUSTRY 2079, EDIBLE FATS AND OILS, N.E.C.															
1987 Census -----	66	100	75	9.6	259.3	6.8	14.1	171.7	1 295.4	2 974.0	4 270.3	88.2	293.9	(NA)	77
1986 ASM -----	(NA)	(NA)	(NA)	10.4	262.7	7.2	14.5	166.9	1 290.0	3 631.3	4 951.0	82.0	400.4	(NA)	(NA)
1985 ASM -----	(NA)	(NA)	(NA)	10.7	264.8	7.5	15.3	168.9	1 190.4	4 368.1	5 608.4	100.3	418.9	(NA)	(NA)
1984 ASM -----	(NA)	(NA)	(NA)	11.4	271.2	8.2	16.6	175.3	1 291.3	4 444.8	5 716.9	77.2	550.1	(NA)	(NA)
1983 ASM -----	(NA)	(NA)	(NA)	11.6	270.9	8.1	16.6	171.5	1 199.6	3 580.1	4 745.0	84.7	409.5	(NA)	(NA)
1982 Census -----	79	118	85	12.5	272.0	8.7	17.6	173.8	1 261.7	3 643.3	4 905.6	96.5	353.1	85	77
1981 ASM -----	(NA)	(NA)	(NA)	12.0	249.3	8.5	17.6	164.5	1 140.3	4 030.2	5 202.0	102.9	357.9	(NA)	(NA)
1980 ASM -----	(NA)	(NA)	(NA)	12.8	243.1	9.0	18.4	160.9	1 030.4	4 114.5	5 131.6	84.1	426.9	(NA)	(NA)
1979 ASM -----	(NA)	(NA)	(NA)	12.8	231.2	8.9	19.0	155.0	1 077.5	4 271.6	5 290.6	82.9	436.7	(NA)	(NA)
1978 ASM -----	(NA)	(NA)	(NA)	13.1	214.2	9.2	19.0	143.0	937.0	3 887.7	4 783.7				

See footnotes at end of table.

Table 1. Historical Statistics for the Industry: 1987 and Earlier Years—Con.

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.]

Excludes data for airplanes. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.

Year ¹	All establishments ³			All employees		Production workers			Value added by manufacture ⁴ (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories ⁴ (million dollars)	Ratios	
	Com-panies ² (no.)	Total (no.)	With 20 employ-ees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)							
INDUSTRY 2079, EDIBLE FATS AND OILS, N.E.C.—Con.															
1977 Census ----	67	109	80	12.7	190.5	9.0	18.7	125.8	691.8	3 293.3	4 025.0	62.1	324.3	89	77
1976 ASM -----	(NA)	(NA)	(NA)	13.0	170.1	9.3	19.5	114.3	734.0	2 748.3	3 450.9	42.1	355.9	(NA)	(NA)
1975 ASM -----	(NA)	(NA)	(NA)	12.9	161.3	9.1	19.1	107.8	664.3	3 297.9	3 996.5	42.8	340.6	(NA)	(NA)
1974 ASM -----	(NA)	(NA)	(NA)	13.1	152.8	9.2	19.4	102.6	709.2	3 360.6	3 974.4	28.7	395.0	(NA)	(NA)
1973 ASM -----	(NA)	(NA)	(NA)	13.3	147.0	9.5	20.3	98.6	619.7	2 278.8	2 848.5	33.7	251.2	(NA)	(NA)
1972 Census ----	64	109	86	12.9	133.7	9.0	19.5	87.8	512.6	1 549.4	2 068.1	35.5	167.1	89	78

Note: Establishments of single unit companies with up to 20 employees (cutoff varied by industry) were excluded from the mail portion of the census. Data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were estimated based on administrative-record information from other agencies in conjunction with industry averages. These establishments accounted for the following percent of total value of shipments: SIC 2074, 3%; SIC 2075, 2%; SIC 2076, 2%; SIC 2077, 9%; and SIC 2079, 3%.

¹In annual survey of manufactures (ASM) years, data are estimates based on a representative sample of establishments canvassed annually and may differ from results of a complete canvass of all establishments. ASM publication shows percentage standard errors. Unless otherwise noted, for data prior to 1972, see 1972 Census of Manufactures, vol. II, table 1a of the Industry chapter.

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during year.

⁴Beginning with the 1982 Census of Manufactures, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior Censuses and annual surveys of manufactures in which respondents were permitted to value their inventories using any generally accepted accounting method. Consequently, inventories and value added by manufacture are not comparable to prior-year data.

⁵Estimates for new capital expenditures have associated standard error of 15 percent or more and may be of limited reliability. Estimates for other data items are of acceptable reliability.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	1987				1982			
		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments ¹		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments ¹	
				Quantity ²	Value (million dollars)			Quantity ²	Value (million dollars)
2074- --	COTTONSEED OIL MILLS								
	Total -----	(NA)	(X)	(X)	435.3	(NA)	(X)	(X)	812.2
20741 --	Cottonseed oil, crude:								
20741 00	Cottonseed oil, crude ----- mil lb..	17	563.6	495.6	89.3	24	1 545.2	746.7	150.2
20742 --	Cottonseed oil, once-refined:								
20742 00	Cottonseed oil, once-refined (after alkali or caustic wash but before deodorizing or use in end products) ----- mil lb..	15	445.7	409.9	81.0	18	1 272.6	963.6	219.7
20743 --	Cotton linters:								
20743 00	Cotton linters ----- mil lb..	23	424.0	416.8	47.1	33	763.2	722.4	70.0
20744 --	Cottonseed cake and meal and other byproducts -----	(NA)	(X)	(X)	204.2	(NA)	(X)	(X)	360.1
20744 14	Cottonseed cake and meal ----- 1,000 s	24	1 210.5	1 228.9	164.0	35	2 219.4	2 205.4	315.5
20744 51	Hulls ----- do..	24	630.1	620.5	30.6	31	1 313.6	1 318.8	37.0
20744 98	Other cottonseed byproducts ----- mil lb..	6	(X)	(D)	(D)	6	(X)	162.6	7.6
20744 99	Cottonseed oil, once-refined, purchased and deodorized only ----- do..	2	(X)	(D)	(D)	(NA)	(X)	(X)	(³)
20744 00	Cottonseed cake and meal and other byproducts, n.s.k. -----	(NA)	(X)	(X)	(D)	(NA)	(X)	(X)	-
20740 --	Cottonseed oil mill products, n.s.k. -----	(NA)	(X)	(X)	13.7	(NA)	(X)	(X)	312.1
20740 00	Cottonseed oil mill products, n.s.k., typically for establishments with 20 employees or more (see note) -----	(NA)	(X)	(X)	10.0	(NA)	(X)	(X)	36.1
20740 02	Cottonseed oil mill products, n.s.k., typically for establishments with less than 20 employees (see note) -----	(NA)	(X)	(X)	3.5	(NA)	(X)	(X)	6.0
2075- --	SOYBEAN OIL MILLS								
	Total -----	(NA)	(X)	(X)	7 798.5	(NA)	(X)	(X)	7 257.4
20751 --	Soybean oil -----	(NA)	(X)	(X)	2 297.0	(NA)	(X)	(X)	2 375.4
20751 13	Soybean oil, crude:								
20751 15	Not degummed ----- mil lb..	16	3 935.5	2 654.2	437.3	20	4 468.9	4 079.4	799.2
20751 21	Soybean oil, once-refined (after alkali or caustic wash but before deodorizing or use in end products) ----- do..	10	7 301.0	7 241.2	1 183.2	14	6 638.4	5 322.7	1 025.3
20751 31	Soybean oil processed for inedible purposes (acid refined, etc.) ----- do..	12	5 210.5	3 234.3	672.8	13	9 060.2	2 435.6	547.5
20751 00	Soybean oil, n.s.k. -----	4	(X)	31.2	3.7	2	(X)	(X)	(D)
	Soybean oil, n.s.k. -----	(NA)	(X)	(X)	-	(NA)	(X)	(X)	(D)
20752 --	Soybean cake, meal, and other byproducts -----	(NA)	(X)	(X)	5 354.6	(NA)	(X)	(X)	4 836.2
20752 11	Meal ----- 1,000 s	18	26 385.6	26 450.6	4 962.9	24	23 959.1	23 465.5	4 539.3
20752 31	Soy flour and grits ----- mil lb..	6	(X)	(D)	(D)	8	(X)	(D)	(D)
20752 32	Concentrates -----	1	(X)	(D)	(D)	3	(X)	(D)	(D)
20752 51	Lecithin ----- do..	7	93.3	109.4	36.0	7	42.2	42.4	18.3
20752 61	Millfeed (hullmeal) ----- 1,000 s	10	1 219.8	1 043.3	64.3	15	816.7	800.1	99.7

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987				1982			
		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments ¹		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments ¹	
				Quantity ²	Value (million dollars)			Quantity ²	Value (million dollars)
2075- --	SOYBEAN OIL MILLS—Con.								
20752 --	Soybean cake, meal, and other byproducts—Con.								
20752 98	Other soybean products, including isolates	9	(X)	237.3	120.5	10	(X)	218.7	95.6
20752 99	Soybean oil, once-refined, purchased and deodorized only	5	(X)	330.1	91.0	(NA)	(X)	(X)	(*)
20752 00	Soybean cake, meal, and other byproducts, n.s.k.	(NA)	(X)	(X)	(Z)	(NA)	(X)	(X)	2.2
20750 --	Soybean oil mill products, n.s.k.	(NA)	(X)	(X)	147.0	(NA)	(X)	(X)	445.7
20750 00	Soybean oil mill products, n.s.k., typically for establishments with 5 employees or more (see note)	(NA)	(X)	(X)	103.3	(NA)	(X)	(X)	(D)
20750 02	Soybean oil mill products, n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	(X)	(X)	43.7	(NA)	(X)	(X)	(D)
2076- --	VEGETABLE OIL MILLS, N.E.C.								
	Total	(NA)	(X)	(X)	491.5	(NA)	(X)	(X)	544.3
20761 --	Linseed oil	(NA)	(X)	(X)	104.9	(NA)	(X)	(X)	84.1
20761 13	Linseed oil, raw and boiled	5	245.0	254.9	49.1	4	141.2	116.1	29.1
20761 33	Linseed oil, processed (refined, blown, heat treated, or chemically modified)	6	154.8	226.3	53.9	5	154.9	168.4	55.0
20761 00	Linseed oil, n.s.k.	(NA)	(X)	(X)	1.9	(NA)	(X)	(X)	-
20762 --	Vegetable oils other than corn, cottonseed, soybean, and linseed	(NA)	(X)	(X)	216.1	(NA)	(X)	(X)	372.1
20762 23	Coconut oil, once-refined (after alkali or caustic wash but before deodorizing or use in end products)	5	226.8	149.8	34.4	9	767.0	406.6	117.2
20762 52	Peanut oil:								
20762 57	Peanut oil, crude	8	143.0	145.4	34.7	6	157.6	104.6	28.4
	Peanut oil, once-refined (after alkali or caustic wash but before deodorizing or use in end products)	4	(D)	(D)	(D)	3	135.7	(D)	(D)
20762 62	Sunflower oil:								
20762 63	Sunflower seed oil, crude	2	(D)	(D)	(D)	6	295.2	300.7	69.8
	Sunflower seed oil, once-refined (after alkali or caustic wash but before deodorizing or use in end products)	4	(D)	(D)	(D)	7	(D)	105.3	27.4
20762 64	Other vegetable oils, including safflower oil, castor oil, tung oil, etc.:	3	(D)	(D)	(D)	5	(D)	(D)	(D)
	Crude								
	Once-refined (after alkali or caustic wash but before deodorizing or use in end products):	4	136.8	135.6	28.3	4	(D)	(D)	(D)
20762 65	Palm	5	85.1	65.3	23.1	10	(D)	206.2	65.3
20762 68	Other oils								
20762 73	Processed for inedible purposes (tung oil, dehydrated castor oil, etc.)	2	(X)	(D)	(D)	2	(X)	(D)	(D)
20762 00	Vegetable oils, other than corn, cottonseed, soybean, and linseed, n.s.k.	(NA)	(X)	(X)	5.4	(NA)	(X)	(X)	2.4
20763 --	Other vegetable oil mill products, except cottonseed and soybean	(NA)	(X)	(X)	162.6	(NA)	(X)	(X)	84.8
20763 11	Linseed cake and meal	4	(D)	(D)	(D)	3	148.1	173.5	25.0
20763 51	Peanut cake and meal	7	138.1	147.5	12.3	7	144.4	145.0	26.7
20763 61	Sunflower seed cake and meal	2	(D)	(D)	(D)	7	228.5	230.0	23.3
20763 97	Other oil seed cake and meal	4	(D)	(D)	(D)	5	(D)	63.1	8.6
20763 94	Coconut oil, once-refined, purchased and deodorized only	2							
20763 95	Peanut oil, once-refined, purchased and deodorized only	2							
20763 96	Sunflower oil, once-refined, purchased and deodorized only	1	(X)	256.8	71.4	(NA)	(X)	(X)	(*)
20763 91	Palm oil, once-refined, purchased and deodorized only	2							
20763 98	Other oils, once-refined, except cottonseed, soybean, linseed, peanut, or sunflower, purchased and deodorized only	4							
20763 00	Other vegetable oil mill products, except cottonseed and soybean, n.s.k.	(NA)	(X)	(X)	(D)	(NA)	(X)	(X)	1.1
20760 --	Vegetable oil mill products, n.e.c., n.s.k.	(NA)	(X)	(X)	7.8	(NA)	(X)	(X)	53.3
20760 00	Vegetable oil mill products, n.e.c., n.s.k., typically for establishments with 10 employees or more (see note)	(NA)	(X)	(X)	3.0	(NA)	(X)	(X)	5.7
20760 02	Vegetable oil mill products, n.e.c., n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	(X)	4.8	(NA)	(X)	(X)	2.6
2077- --	ANIMAL AND MARINE FATS AND OILS								
	Total	(NA)	(X)	(X)	2 111.4	(NA)	(X)	(X)	2 337.1
20771 --	Grease and inedible tallow	(NA)	(X)	(X)	759.2	(NA)	(X)	(X)	938.0
20771 11	Inedible tallow, including inedible animal stearin	78	3 670.8	3 749.6	525.7	149	3 870.1	3 985.9	680.1
20771 13	Grease, other than wool grease	50	1 773.5	1 804.7	215.7	87	1 224.2	1 212.7	187.9
20771 00	Grease and inedible tallow, n.s.k.	(NA)	(X)	(X)	17.8	(NA)	(X)	(X)	70.0
20772 --	Feed and fertilizer byproducts	(NA)	(X)	(X)	1 026.6	(NA)	(X)	(X)	1 093.5
20772 11	Meat and bone meal	82	3 575.2	3 942.6	497.5	119	2 687.8	2 767.4	503.1
20772 12	Dry rendered tankage	36	390.2	436.4	53.6	69	700.0	*743.8	141.7
20772 37	Feather meal	17	426.5	437.5	44.3	24	188.4	186.2	38.9
20772 98	Other feed and fertilizer byproducts, including dried blood, poultry fat and byproducts, meal, and raw products for pet food	60	2 033.5	2 708.7	311.2	71	1 005.6	1 013.1	243.1
20772 00	Feed and fertilizer byproducts, n.s.k.	(NA)	(X)	(X)	119.9	(NA)	(X)	(X)	166.5

See footnotes at end of table.

Table 2. Product and Product Classes—Quantity and Value of Shipments by All Producers: 1987 and 1982—Con.

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For further explanation, see Value of Shipments in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987				1982			
		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments ¹		Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments ¹	
				Quantity ²	Value (million dollars)			Quantity ²	Value (million dollars)
2077--	ANIMAL AND MARINE FATS AND OILS—Con.								
20773 --	Animal and marine oil mill products, including foots	(NA)	(X)	(X)	190.9	(NA)	(X)	(X)	205.4
20773 11	Foots: animal, vegetable, and fish, and acidulated soap stock	12	(X)	(X)	24.9	16	(X)	(X)	55.8
20773 46	Animal oil mill products, including all other animal oils, except fatty acids	7	(X)	168.7	21.5	2	(D)	(D)	(D)
	Marine animal oil products:								
20773 61	Fish and marine animal oil	8	(X)	193.2	33.0	12	298.8	292.8	48.2
20773 66	Fish scrap and meal	19	(X)	435.5	84.1	21	333.9	319.8	96.3
20773 79	Other fish and marine animal oil products	3	(X)	(D)	(D)	4	32.2	30.4	1.7
20773 00	Animal and marine oil mill products, including foots, n.s.k.	(NA)	(X)	(X)	(D)	(NA)	(X)	(X)	(D)
20770 --	Animal and marine fats and oils, n.s.k.	(NA)	(X)	(X)	134.7	(NA)	(X)	(X)	100.2
20770 00	Animal and marine fats and oils, n.s.k. typically for establishments with 10 employees or more (see note)	(NA)	(X)	(X)	87.0	(NA)	(X)	(X)	65.9
20770 02	Animal and marine fats and oils, n.s.k., typically for establishments with less than 10 employees (see note)	(NA)	(X)	(X)	44.3	(NA)	(X)	(X)	34.3
2079--	EDIBLE FATS AND OILS, N.E.C.								
	Total	(NA)	(X)	(X)	4 863.1	(NA)	(X)	(X)	5 340.5
20791 --	Shortening and cooking oils	(NA)	(X)	(X)	3 574.1	(NA)	(X)	(X)	4 028.6
20791 13	Baking or frying fats (shortening):								
20791 15	100 percent vegetable oil	28	3 413.3	5 080.0	1 553.0	35	3 538.5	3 481.4	1 403.2
20791 42	100 percent animal fat or blends of vegetable oil and animal fat	25	737.1	1 646.1	394.7	29	1 486.7	1 523.4	468.2
	Hydrogenated oils other than baking or frying fats (for confectionery fats, mellorine fats, whipped topping, etc.)	5	(X)	(D)	(D)	4	(D)	(D)	(D)
	Salad or cooking oil (fully-refined and deodorized oil produced at the same establishment):								
20791 51	Soybean cooking or salad oil:								
20791 52	Partially hydrogenated	25	1 490.7	1 706.8	510.8	26	3 792.0	3 593.4	1 132.8
20791 53	Other	10	981.3	999.3	280.6	14	509.5	507.0	165.5
20791 54	Cottonseed cooking or salad oil	9	132.2	153.6	51.6	14	396.4	394.9	138.3
20791 59	Mixtures of vegetable cooking or salad oil	7	(D)	(D)	(D)	14	260.1	284.3	105.8
20791 71	All other cooking or salad oil	17	300.4	352.3	230.5	27	780.3	711.3	336.9
20791 81	Vegetable oil winter stearin	2	(X)	(D)	(D)	5	(X)	85.4	26.9
20791 88	Margarine oil, except corn	4	(X)	466.8	106.5	6	(X)	750.7	196.1
20791 91	All other fully-refined oils, except corn	6	(X)	215.8	72.5	8	(X)	(D)	(D)
20791 00	Shortening and cooking oils, n.s.k.	(NA)	(X)	(X)	8.1	(NA)	(X)	(X)	13.8
20792 --	Margarine:								
20792 00	Margarine, including butter blends	23	2 175.4	2 292.5	1 189.6	27	2 776.0	2 857.4	1 225.1
20790 --	Edible fats and oils, n.e.c., n.s.k.	(NA)	(X)	(X)	99.4	(NA)	(X)	(X)	86.8
20790 00	Edible fats and oils, n.e.c., n.s.k., typically for establishments with 20 employees or more (see note)	(NA)	(X)	(X)	66.7	(NA)	(X)	(X)	81.5
20790 02	Edible fats and oils, n.e.c., n.s.k., typically for establishments with less than 20 employees (see note)	(NA)	(X)	(X)	32.7	(NA)	(X)	(X)	5.3

Note: In 1987 Census of Manufactures, data for establishments of small single-unit companies with up to 20 employees were estimated from administrative-record data rather than data actually collected from respondents. Employment cutoffs used for administrative records for each industry and shipments figures are included in code ending with "002". In both 1987 and 1982 Censuses of Manufactures, products not completely identified on standard forms were coded in appropriate product class (five-digit) followed by "00" or to appropriate product group code (four-digit) followed by "000".

¹Data reported by all producers, not just those with shipments of \$100,000 or more.

²For some establishments, data have been estimated from central unit values which are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: * 10 to 19 percent estimated; ** 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

³For 1982, data for product code 2074499 were included with data for product code 2074000.

⁴For 1982, data for product code 2075299 were included with data for product code 2075000.

⁵For 1982, data for product codes 2076394-2076398 were included with data for product code 2076000.

Table 3. Materials Consumed by Kind: 1987 and 1982

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 2074, COTTONSEED OIL MILLS				
	Materials, ingredients, containers, and supplies	(X)	300.0	(X)	583.4
013111	Cottonseed	2 593.7	255.9	4 676.3	491.6
	Cottonseed oil:				
207411	Crude				
207421	Once-refined	(NA)	35.2	(NA)	44.5
970099	All other materials, ingredients, containers, and supplies				
971000	Materials, ingredients, containers, and supplies, n.s.k. ²	(X)	8.9	(X)	47.3

See footnotes at end of table.

Table 3. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987		1982	
		Quantity ¹	Delivered cost (million dollars)	Quantity ¹	Delivered cost (million dollars)
	INDUSTRY 2075, SOYBEAN OIL MILLS				
	Materials, ingredients, containers, and supplies	(X)	7 369.9	(X)	6 968.3
011611	Soybeans 1,000 s tons...	35 402.6	6 159.0	29 657.0	5 950.0
	Soybean oil:				
207511	Crude mil lb...	3 373.1	578.2	(³)	(³)
207521	Once-refined do...	-	-	(³)	(³)
260091	Paper and paperboard containers	(X)	14.8	(X)	8.8
970099	All other materials, ingredients, containers, and supplies	(X)	490.6	(X)	3541.8
971000	Materials, ingredients, containers, and supplies, n.s.k. ²	(X)	127.4	(X)	467.7
	INDUSTRY 2076, VEGETABLE OIL MILLS, N.E.C.				
	Materials, ingredients, containers, and supplies	(X)	318.9	(X)	357.5
	Seeds, nuts, and beans:				
011911	Flaxseed 1,000 s tons...	(D)	(D)	286.6	63.0
011912	Sunflower seed do...	(D)	(D)	389.2	77.8
013920	Peanuts do...	(D)	(D)	133.9	33.0
010015	Other seeds, nuts, and beans (excluding sunflower, flaxseed, and peanuts) do...	(D)	(D)	93.3	18.3
970099	All other materials, ingredients, containers, and supplies	(X)	174.7	(X)	159.2
971000	Materials, ingredients, containers, and supplies, n.s.k. ²	(X)	6.2	(X)	6.2
	INDUSTRY 2077, ANIMAL AND MARINE FATS AND OILS				
	(Material data were not collected for this industry.)				
	INDUSTRY 2079, EDIBLE FATS AND OILS, N.E.C.				
	Materials, ingredients, containers, and supplies	(X)	2 797.8	(X)	3 430.7
201104	Tallow and stearin, edible mil lb...	717.7	122.2	860.8	184.2
	Cottonseed oil:				
207411	Crude mil lb...	249.2	48.9	339.6	71.0
207421	Once-refined do...	104.4	22.3	130.7	33.7
207915	Fully-refined do...	59.8	12.9	56.6	17.1
	Soybean oil:				
207511	Crude mil lb...	5 079.7	868.0	5 839.1	1 185.2
207512	Once-refined do...	395.1	98.5	356.2	105.3
207916	Fully-refined do...	1 423.5	330.1	2 027.4	554.2
	Other oil:				
207601	Crude mil lb...	1 003.1	216.4	667.5	181.0
207603	Once-refined do...	148.6	34.7	319.1	64.1
207917	Fully-refined do...	570.7	145.6	*328.3	105.4
201151	Lard do...	273.2	40.5	279.6	58.9
	Containers:				
260091	Paper and paperboard containers (including shipping sacks and other paper packaging supplies)	(X)	136.9	(X)	102.7
308015	Plastics containers	(X)	165.4	(X)	101.3
322101	Glass containers 1,000 gross...	(S)	20.4	3 091.2	102.0
340003	Metal containers, excluding drums	(X)	35.6	(X)	39.4
341220	Metal drums	(X)	5.2	(X)	11.9
970099	All other materials, ingredients, containers, and supplies	(X)	432.1	(X)	430.3
971000	Materials, ingredients, containers, and supplies, n.s.k. ²	(X)	62.1	(X)	83.0

¹For some establishments, data have been estimated from central unit values which are based on quantity-cost relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: * 10 to 19 percent estimated; ** 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by (S).

²Total cost of materials of establishments that did not report detailed materials data, including establishments that were not mailed a form.

³For 1982, data for material codes 207511 and 207521 were included with material code 970099.

APPENDIX

Scope and Coverage and Explanation of Terms

GENERAL

The 1987 Census of Manufactures is the 32nd census of manufacturing establishments conducted in the United States. For 1987, it was conducted as part of the economic censuses, which included the censuses of mineral industries, construction industries, retail and wholesale trades, service industries, selected transportation activities, and minority-owned and women-owned businesses, under authority of title 13 of the United States Code. Title 13 specifies that an economic census be conducted every 5 years to cover years ending in 2 and 7.

SCOPE AND COVERAGE

Establishment Basis of Reporting

The census of manufactures is conducted on an establishment basis. All manufacturing establishments with one paid employee or more at any time during the year are covered by the census of manufactures. Therefore, a company operating at more than one location is required to file a separate report for each location. This report excludes information for separately operated administrative offices, warehouses, garages, and other auxiliary units which service manufacturing establishments of the same company. Where these auxiliary operations are conducted at the same location as the manufacturing operation, they are usually included in the report for the operating manufacturing establishment.

Use of Administrative Records

From a universe of approximately 350,000 manufacturing establishments in the 1987 Census of Manufactures, approximately 150,000 small single-establishment companies were excused from filing reports. Selection of the small establishment nonmail cases was done on an industry-by-industry basis. A variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. The cutoffs were selected so the administrative-record cases would account for approximately 3 percent or less of the value of shipments for the industry. These cutoffs were then adjusted so that all single-establishment companies with less than 5 employees were excluded from the mail canvass, while all establishments with more than 20 employees were included. Where establishments in the 5 to 20 employee size range were included in the mail canvass, an abbreviated census form was frequently used.

For these nonmail establishments, (and a small number of larger establishment whose reports were not received at the time the data were tabulated) data on employment, payroll, and receipts were obtained from administrative records of other government agencies rather than from census forms. The administrative-record information was then used in conjunction with industry averages to estimate the data for these establishments. The value of shipments and cost of materials were not distributed among specific products and materials but were included in the product and material "not specified by kind" (n.s.k.) categories.

EXPLANATION OF TERMS

Number of establishments and companies—A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

All employees—Includes all full-time and part-time employees on the payrolls at any time during the year. Included are all persons on paid sick leave, paid holidays, and paid vacations. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average of those for midmonth payroll periods of March, May, August, and November.

Production workers—Includes workers up through the working-supervisor level engaged in fabricating, processing, assembling, inspecting, receiving, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial, guard services, product development, auxiliary production for plant's own use (e.g., power-plant), recordkeeping, and other closely associated services. Truckdrivers delivering ready-mixed concrete are also included in production workers.

Other employees—Includes nonproduction personnel, including those engaged in the following activities: supervision above working-supervisor level, sales (including driver/salespersons), sales delivery (truckdrivers and helpers), advertising, credit collection, installation and

servicing of own product, clerical and routine office functions, executive, purchasing, finance, legal, personnel (including cafeteria, etc.), professional, and technical employees.

Payroll—Includes the gross earnings for the “employees” defined above, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees’ Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Respondents were told that in reporting they could follow the definition of payrolls used for calculating the Federal withholding tax.

Production-worker hours—Covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave when the employee was not at the plant.

Cost of materials—Refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuels consumed, regardless of whether they were purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

The important components of this cost item are (a) all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year; (b) electric energy purchased; (c) fuels consumed for heat, power, or generating electricity; (d) work done by others on materials or parts furnished by manufacturing establishments (contract work); and (e) products bought and resold in the same condition.

Specific materials consumed (table 3)—In addition to the total cost of materials which every establishment was required to report, information was also collected for most manufacturing industries on the consumption of major materials used in manufacturing. These inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers’ records. Establishments consuming less than a specified amount (usually \$10,000) of a specific material were not requested to report consumption of that material separately. Also, the cost of materials for the small establishments for which administrative records were used was estimated as “not specified by kind” (n.s.k.).

Value of shipments and other receipts—Generally refers to received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all

miscellaneous receipts such as receipts for contract work performed for others, installation and repair receipts, sale of scrap, and sale of products bought and resold without further processing. Included are all items made by or for the establishment from materials owned by it whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In a few industries, the value of production or value of work completed is used instead of value of shipments. These industries are identified in the introduction and are footnoted in table 1.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, that is, including not only the direct costs of production but also a reasonable proportion of “all other costs” (including company overhead and profit).

Shipments or production of individual products (table 2)—In the 1987 census, detailed shipment information was collected for approximately 11,000 individual products. These products are identified by a seven-digit code and are grouped into approximately 1,500 classes of products, which in turn are primary to 459 four-digit industries. Data at the five-digit product-class level have been collected each year as part of the annual survey of manufactures. Information at the seven-digit level, collected for many industries in the current industrial reports program, is not included in this table.

Value added by manufacture—This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for products manufactured plus receipts for services rendered. The result of this calculation is then adjusted by the addition of value added by merchandising operations (that is, the difference between the sales value and cost of merchandise sold without further manufacturing, processing, or assembly) plus the net change in finished goods and work-in-process inventories between the beginning and end of the year.

For those industries where value of production is collected instead of value of shipments (see footnote in table 1), value added is adjusted only for the change in work-in-process inventories between the beginning and end of the year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

Value added avoids the duplication in the figure for value of shipments which results from the use of products of some establishments as materials by others. Value

added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

Expenditures for new plant and equipment—Establishments in operation and any known plants under construction were asked to report their expenditures for (a) permanent additions and major alterations to manufacturing establishments and (b) new machinery and equipment used for replacement and additions to plant capacity if they are of the type for which depreciation accounts are ordinarily maintained.

These totals exclude expenditures for used plant and equipment, expenditures for land, and cost of maintenance and repairs charged as current operating expenses. Data for used plant and equipment will be published in the final industry bulletin.

End-of-year inventories—Comprised of (a) finished products; (b) work-in-process; and (c) materials, supplies, fuels, etc. Beginning in 1982, respondents were asked to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior years in which respondents were permitted to value their inventories using any generally accepted accounting method.

Therefore, 1982 through 1987 data for inventories are not strictly comparable to prior-year data.

Specialization and coverage ratios—An establishment is classified in a particular industry if its shipments of primary products of the industry exceed in value its shipments of the products of any other single industry. An establishments' shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). The following ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in table 1 and data on product shipments shown in table 2.

Specialization ratio—Represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

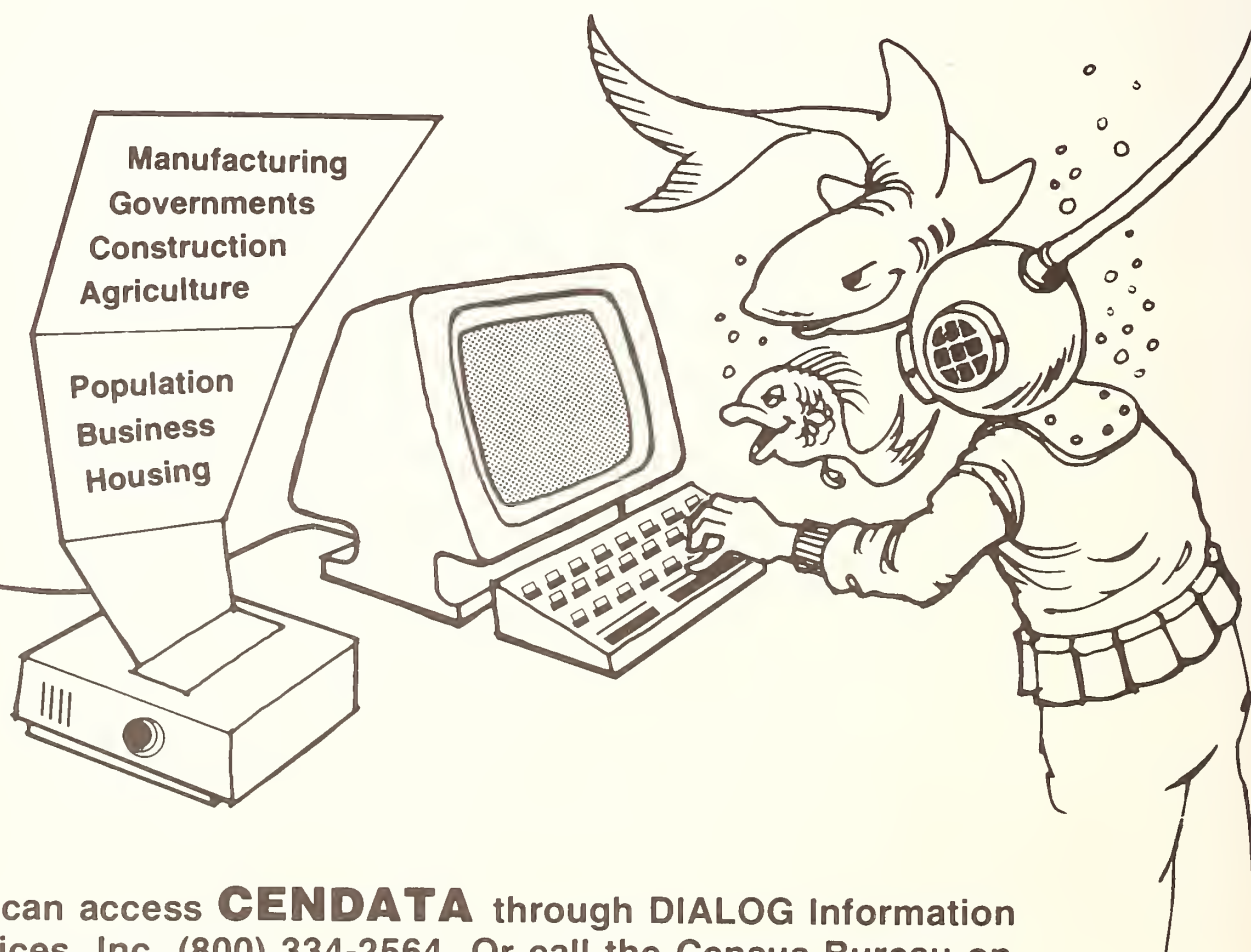
Coverage ratio—Represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments, wherever classified.

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